

## Techniques in medical education

# Three visual techniques to enhance interprofessional learning

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### Summary

Many changes in the delivery of healthcare in the UK have highlighted the need for healthcare professionals to learn to work together as teams for the benefit of patients. Whatever the profession or level, whether for postgraduate education and training, continuing professional development, or for undergraduates, learners should have an opportunity to learn about and with, other healthcare practitioners in a stimulating and exciting way. Learning to understand how people think, feel, and react, and the parts they play at work, both as professionals and individuals, can only be achieved through sensitive discussion and exchange of views. Teaching and learning methods must provide opportunities for this to happen. This paper describes three small-group teaching techniques which encourage a high level of learner collaboration and team-working. Learning content is focused on real-life healthcare issues and strong visual images are used to stimulate lively discussion and debate. Each description includes the learning objectives of each exercise, basic equipment and resources, and learning outcomes.

**Keywords:** teaching techniques; education; interprofessional learning

Small-group teaching techniques are widely used in a variety of educational settings as a means of actively involving participants in learning. The purpose may be extrinsic, for example, to find a solution to a problem, identify issues of concern to an organisation, or to establish and maintain a corporate identity, where the outcome of the activity is the major goal. Other learning groups may have intrinsic aims and be more concerned with the educational process, where the end is also the means,<sup>1</sup> for example, through the development of communication skills such as explaining, questioning, listening and giving feedback.<sup>2</sup> Small-group work can facilitate becoming a critical thinker, a collaborative learner,<sup>3</sup> a team worker<sup>4</sup> and the development of intellectual skills such as analysis, synthesis and evaluation.

In addition, small-group work can be used to develop "awareness and understanding of others' interests and needs, develop a social conscience, and an ability, and sense of enjoyment in lifelong learning".<sup>1</sup> These are clearly attributes and abilities needed by all healthcare professionals in the pursuit of comprehensive patient care and when different professions are brought together to learn.

This paper describes three techniques that can be used with small multiprofessional groups. Each technique begins with a 'brainstorming' session to encourage a wide spectrum of creative ideas.<sup>5</sup> Only single words or phrases are suggested during this stage and listed on a board or flip chart by a group 'scribe'. This is followed by an analytic stage when ideas are discarded, linked, or developed further. In a feedback or debriefing session, a spokesperson presents the results of group discussions, either verbally or with visual aids. Further discussion highlights the differing perspectives identified by each group, which are drawn together and summarised by the session leader. The technique can easily embody the aims of interprofessional working and learning, which may include developing awareness and understanding of different professional roles, identifying issues of common concern, developing collaborative and team-working skills and recognising the importance of values and beliefs which underpin and determine individual professional practice.<sup>6</sup> Despite what may seem to be a serious approach, they are also extremely enjoyable learning activities with a strong social element.<sup>7</sup>

### Talking walls

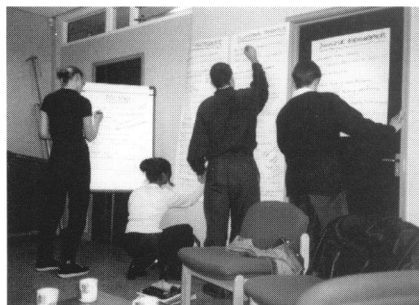
'Talking walls' are widely used both commercially and in training situations, mainly for exploring issues, analysing problems, or developing action plans. This technique has similarities with other methods that use flip charts and acetates and which are task- or problem-orientated. It can be used for small-group learning in tutorials, or as a way of enhancing large-group teaching, either by splitting a large group into smaller syndicates of learners working on the same task or problem, or by giving different aspects of the same problem to each sub-group. Bringing groups together for a debriefing session allows participants to share their findings on the same or different issues either verbally, or by using acetates or flip-chart sheets.

### METHOD, EQUIPMENT, AND RESOURCES

The 'talking wall' exercise described here was successfully used by interprofessional groups of final year undergraduates prior to final qualification, and included medical, dental, nursing and therapy students. Students were asked to explore each other's roles and responsibilities using the talking wall technique (figure 1). In this exercise, small interprofessional groups are allocated a space in which they can discuss freely. Flip-chart sheets for each group, one for each profession, are attached to a wall prior to the session. Using blue marker pens, students write their perceptions of the roles and duties of the professions on the respective sheets, with the exception of their own. Only new items are added to the lists to avoid duplication. About 15 min is allowed for this part of the task.

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**Figure 1** Using the 'talking wall' technique, multi-professional groups of seven or eight students enjoy the physical freedom of movement and the opportunity to put forward their own views about the roles of other health-related professions. Their written comments reveal the degree of accuracy and overlap of their perceptions of each others' roles and responsibilities, and provide rich material for group work. Ensuring that every group member has an equally valued point of view also helps to develop personal confidence and encourages a congenial atmosphere in which to develop the later group discussion



**Figure 2** This photograph of a young mother with her two children can stimulate consideration of a wide variety of clinical and social issues. The mother is young and may be married, divorced or single. Her housing conditions are very poor, with damp on the walls and unsafe material breaking through the upholstery in her furniture. As well as illustrating that this mother smokes, the photograph also shows that one of the children is bottle fed, and raises the question of what is a safe chair or baby-walker for use by children of this age

#### Learning objectives derived from figure 2

- define the health problems associated with smoking
- describe the roles of health care professionals in the management of effective infant feeding
- compare the roles of members of the primary care team in the management of a stop-smoking programme
- explore the social problems of single parenthood

#### Box 1

Once the lists are complete, the students examine their own lists, and using a red pen, delete misconceptions, correct inaccuracies and add missing items. The use of two colours allows the group to distinguish easily between perceived differences in role perceptions. Each student discusses his or her own flip-chart list with the rest of the group and clarifies points raised. This provides a unique opportunity for interprofessional discussion in which group members are encouraged to ask as many questions as possible. It provides presenting students with an opportunity to demonstrate the breadth and depth of their own professional role.

#### PLENARY SESSION

Different debriefing methods can be applied after this exercise depending on the individual situation, for example, a 'round robin' in which students and facilitators arrange themselves in a circle. A volunteer starts off the comments and continues in a clockwise manner until everyone has had an opportunity to speak. The group reflects on the experience, and shares new learning and personal benefits. Students can 'pass' if they have nothing new to add to observations already made. A 'good' facilitator ensures that enthusiastic discussion is developed between students and across the circle.

#### LEARNING POINTS

An open and relaxed atmosphere is generated by this activity, encouraging even the shyest person to participate. It can be used as an 'ice-breaker' before other interprofessional learning takes place, or as a free-standing exercise. The physical freedom of movement and the potential involvement of everyone also help the group to 'gel'. Students not only benefit from the opportunity to share ideas and information about each other, but feedback shows how an interprofessional approach using this technique can encourage free discussion and offer a chance to learn in some detail what other professions contribute to patient care. Students may understand more clearly "what services are available to patients", "the importance of good communication", "the importance of working together as a multidisciplinary team" and a "better use of NHS resources". They also become more aware of the many overlaps in their roles and gain an insight into the values that underpin each other's professional practice.

#### Using an 'active' photograph

The use of photographs to trigger learning is well recognised in the field of medical education. A photograph is commonly used to present clinical cases or demonstrate specific disease processes, thus avoiding the use of patients and allowing time for discussion. Evidence suggests that the use of clinical photographs is a useful and effective teaching tool if a high standard of photography can be achieved.<sup>8-9</sup> Photographs are used in professional examinations as a means of assessment,<sup>10</sup> and in education and training for many healthcare professions.<sup>11-12</sup> In the innovative area of problem-based learning, photographs have also been used, replacing the usual written scenario.<sup>13</sup> In most situations the choice of photograph is teacher-led; photographs are chosen to highlight, demonstrate or impart information about one particular theme. A carefully chosen 'active' photograph used with an appropriate teaching method can become a powerful learner-centred educational tool, useful for exploring knowledge, skills and attitudes of participants in an interprofessional group situation. The technique described below demonstrates how the use of a photograph can be successful in exploring the roles and responsibilities of an interprofessional group in health promotion and disease prevention issues.

#### METHOD, EQUIPMENT, AND RESOURCES

Photographs can be chosen from a variety of sources, either from medical or non-medical journals, lay magazines dealing with health, disease and society, or newspaper publications, or may be specially composed. The major requirement is that the photograph contains enough content to stimulate thinking in an area pertinent to the workshop theme. Two examples of 'active' photographs are shown. With an interprofessional group, the photograph in figure 2 was used to explore understanding of health promotion issues and stimulate discussion surrounding individual and collective contributions of health professionals. The photograph in figure 3 was used to explore participants' understanding of psychological problems and their individual and team responsibilities towards patients with such difficulties. The need for teaching equipment is minimal requiring only a form of projection to show the photograph to the whole group, the use of a flip-chart to brainstorm issues and develop learning objectives and presentation material for the groups to use during their feedback sessions.



**Figure 3** This photograph shows a young tearful female patient during a visit to her general practitioner. The picture allows students to explore the many possible reasons for her distress and subsequently the ways in which her doctor can sensitively handle these problems. Issues such as empathy, non-verbal communication and counselling are all potential topics for discussion. Further exploration of issues may highlight the need to involve other healthcare professionals, an exploration of their roles and how they can best serve the interests of the patient

#### Learning objectives derived from figure 3

- identify the factors which contribute to psychological problems encountered in general practice
- explore the role of the general practitioner when dealing with psychological problems
- discuss the training needed by general practitioners to deal with patients and their psychological problems effectively
- compare the roles of the healthcare team members when dealing with stress

#### Box 2

#### Summary points

##### *Visual techniques for interprofessional learning:*

- stimulate and maintain interest
- share common goals
- help to establish a co-operative atmosphere
- must be relevant to real-life practice
- are collaborative and encourage team-work
- enable and encourage everyone to participate
- help to overcome language barriers

#### Box 3

At the start of the exercise the session leader or facilitator clarifies the purpose of the workshop and the method to be used. A large multiprofessional group of up to 40 individuals is shown copies of the same photograph. Through the facilitator, the group 'brainstorms' the photograph, making note of all the observations made. These observations are initially simple, for example, in figure 2, there is an indication that the mother is a smoker, and the child is holding a feeding bottle. Once the brainstorming part of the exercise is finished, together with the facilitator, the group refines and arranges the issues raised into major areas for discussion which are listed on a white board or flip-chart. Brainstorming allows everyone to contribute on an equal basis despite the size of the group and encourages thinking around a wide range of issues. To focus learning, each major issue is converted into a question. Example of learning objectives drawn from figures 2 and 3 are listed in boxes 1 and 2, respectively.

The larger group is subsequently divided into smaller multiprofessional groups of up to six individuals. If possible, groups should contain an equal mix of healthcare professionals. To ensure that all relevant themes are explored, each group selects one key question highlighted previously by the larger group. Equipped with flip-charts, coloured pens, acetates and space to talk together, groups explore their chosen themes from both an individual stance and from a group perspective. Time allocated to this part of the exercise can vary. The task can either be completed during the same session or the group can meet at another time. This will depend on both individual and group learning objectives and the time and resources needed to achieve them.

#### PLENARY SESSION

Once the task has been defined, explored and developed, the smaller groups reconvene for presentations and open discussion. Each group is given the opportunity to present findings and learning objectives, to explain the manner in which they were explored and their use of collaborative approaches to learning. Emphasis is placed on gaining an understanding of each other's role in the management of health issues as well as exploring the meaning of shared participation and expansion of roles. Participants may feel a need to continue to meet regularly, either formally or informally. For enthusiastic participants, this activity could form the basis of an interprofessional 'action learning' group.<sup>14</sup>

#### LEARNING POINTS

This technique has been used in two different settings during one of the author's educational visits to Ukraine. These were a group of final year medical students who were in a period of revision for their examinations, and a group of professionals comprising family physicians in training, consultants of various specialisms, hospital-based nurses and nurses working in primary care clinics. These participants were all at postgraduate level and met regularly for learning sessions. The minimal teaching of preventive medicine and high rate of social disease existing in Ukraine, provided a focus for the exercise. The main learning objectives were first, to explore key health education issues and second, to consider how different professionals contribute to patient care.

The use of the same photograph produced different outcomes for each group. Medical students concentrated only on clinical aspects stimulated by the photograph and failed to explore roles and responsibilities and interpersonal aspects, despite receiving guidance from the facilitator. The other group explored not only clinical issues, but also identified learning objectives relating to joint management, roles, responsibilities, and social and psychological issues. This has specifically led to the inclusion of interprofessional group learning within the undergraduate medical curriculum in Ukraine, when exploring issues of health promotion and disease prevention. The visual impact of the 'active photograph' at the beginning of the educational exercise helped to overcome the language barrier. This view was supported by feedback from participating students as well as the personal observation of the facilitator.

#### The theme board

The 'theme board' is another technique sometimes used in commercial settings and successfully adapted for use in postgraduate medical education.<sup>15</sup> This technique, with its strong visual approach, encourages participants to explore a wide range of thoughts, ideas, values and feelings using imagery to construct their understanding of particular concepts. It has the advantage of encouraging visual expression where verbal communication of ideas may be more difficult. As a group activity it can also aid the development of a shared understanding of concepts needed to enhance corporate, institutional or departmental goals. Colourful visual images are more easily retained and when combined with a practical



**Figure 4** The uni-professional theme board, shows learning and working to be stressful and fraught with danger when decisions about patient care are made on an individual rather than a collective basis. Images show either a solitary puzzled individual trying to make decisions alone, or groups of people who are clearly not interested in communicating with each other. The board shows learning being delivered in a linear rather than an integrated way, and emphasises a structure where decisions are made in a top-down hierarchical manner.



**Figure 5** The interprofessional theme board, in contrast, shows learning and working to be a lively and much more stimulating activity, where everyone has a voice and decisions about patient care are made collectively. The powerful feelings of satisfaction it brings to both the individual and the group is demonstrated by images that show a strong sense of co-operation and teamwork between individuals from different healthcare backgrounds. The board conveys a strong sense of partnership combined with a flexible approach, but at the same time emphasises that sharing learning with other professionals is not an easy option.

activity, retention of learning is increased<sup>15</sup> Adapting this technique to explore differences between interprofessional learning and traditional subject-based learning for undergraduates is both easy and appropriate. The boards in figures 4 and 5 show a group's contrasting views about the characteristics of single profession learning and working and the characteristics needed in interprofessional settings. These pictorial descriptions become the focus of a subsequent plenary session when thoughts and feelings of each group are presented and shared.

#### METHOD, EQUIPMENT AND RESOURCES

This technique works best with small groups of two to four participants. Groups need glue, scissors, a wide selection of magazines with a high pictorial content to stimulate ideas (eg, women's, leisure and healthcare publications), two A4 boards or card, and a table to work on. As with the other two techniques described above, the purpose of the session and the method to be used should be made clear to participants. Using a white-board or flip chart and a 'scribe', the activity begins with a brainstorming session to list the characteristics and outcomes of single-profession and multi-profession education and training. Participants then get to work with magazines and cut out images that represent most powerfully the concepts and characteristics identified during brainstorming. Pictorial images are most effective when enhanced with easily read and well-chosen text. The images relating to each type of learning are sorted, arranged for maximum visual impact, and glued onto each board to achieve a balanced effect (figures 4 and 5). An explanation of the theme boards in an ensuing plenary session allows expression of thoughts and feelings to the larger group. Such a visual presentation is more enjoyable and stimulating than conventional feedback, which uses hastily prepared flip-charts or acetates.

#### Discussion

The three visual techniques described here have many features in common. They can be used as 'ice-breaker' activities with mixed-profession groups to encourage a relaxed and congenial atmosphere and ensure that learning is active and enjoyable with an element of fun. Participants find them stimulating which helps to engage and maintain their interest. Building a socially cohesive group is a step towards breaking down professional barriers! Follow-on interprofessional learning, for example, through the use of clinical case scenarios or learning strategies such as problem-based learning, is helped by the rapport and preparation for teamwork and collaboration which these visual techniques engender. The combined processes of brainstorming, analysis and plenary sessions are particularly useful for interprofessional learning when people from different professional healthcare backgrounds share similar goals. They have been used successfully with undergraduates, vocational trainees, general practitioners and professions allied to medicine working on management development. As well as being both stimulating and satisfying, they are also effective ways to learn.

A number of other points should be noted. As with all educational activities, interprofessional workshops need to be well-planned and organised with the purpose and outcomes made clear to participants.<sup>16 17</sup> Content should be relevant to participants' real-life experiences and directions; participants should be of similar professional standing, or at a similar educational level. Accommodation should be comfortable and appropriate for small-group work and adequate equipment available. The facilitator needs to have good organising and communication skills, able to 'guide' and 'pull together' discussions, take advantage of the unexpected, and most importantly, have a sense of humour. Finally, each session should be evaluated as a means of monitoring and improving the content, process and outcomes of future interprofessional learning.

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